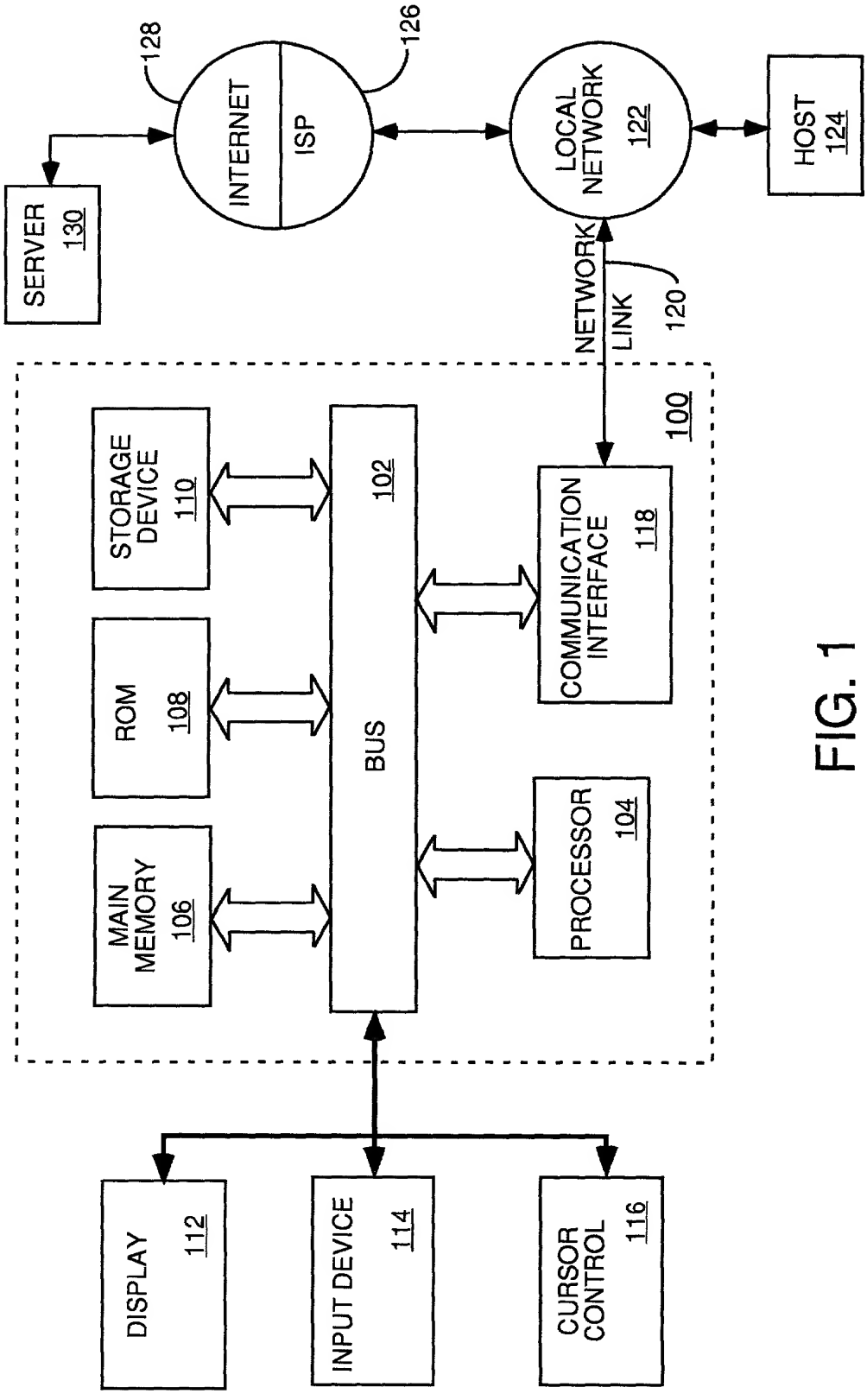

SERVER
130
INTERNET
ISP
128
126
LOCAL NETWORK
122
HOST
124
NETWORK LINK
120
100
STORAGE DEVICE
110
ROM
108
MAIN MEMORY
106
BUS
102
COMMUNICATION INTERFACE
118
PROCESSOR
104
DISPLAY
112
INPUT DEVICE
114
CURSOR CONTROL
116

FIG. 1

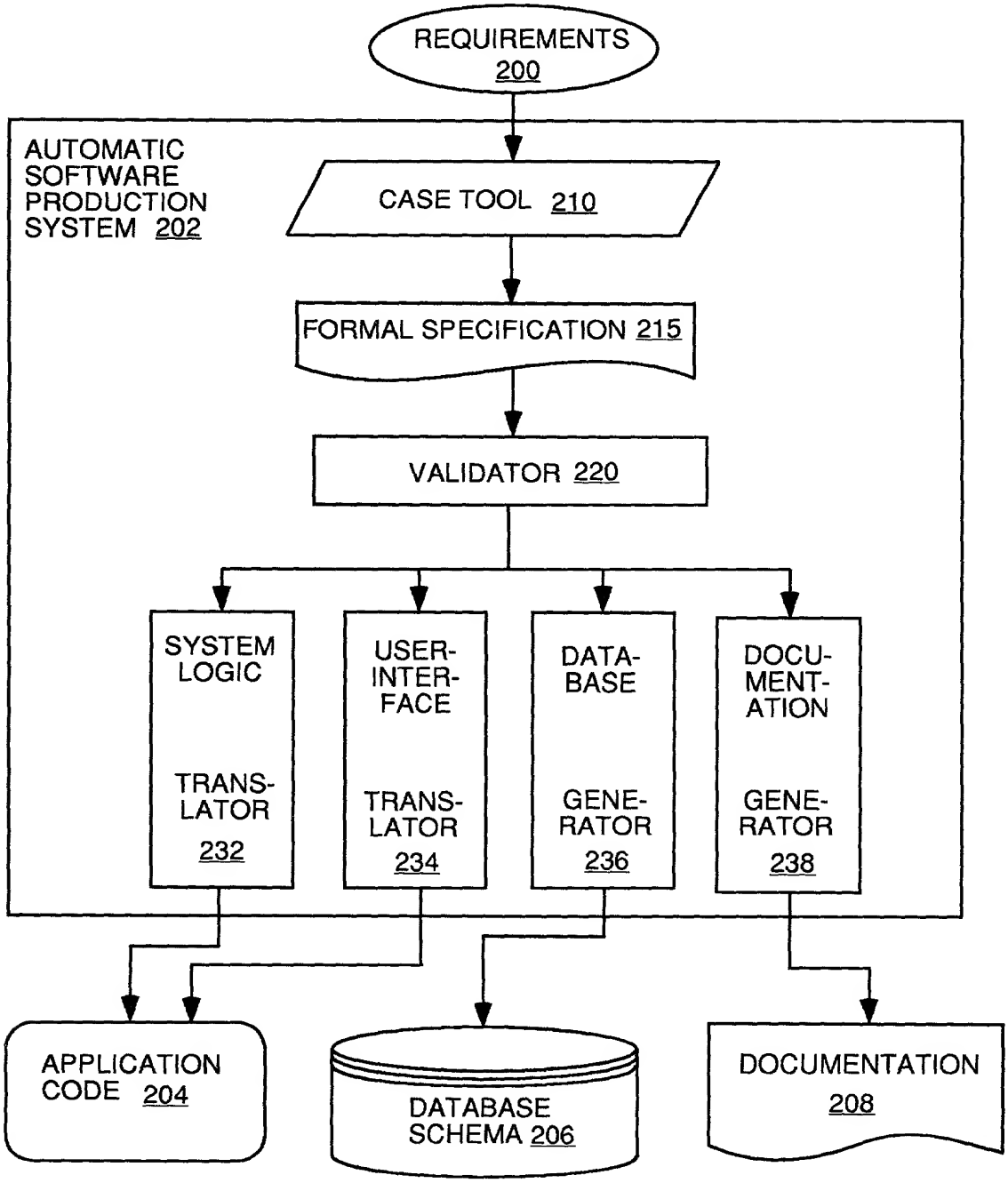

REQUIREMENTS 200
AUTOMATIC SOFTWARE PRODUCTION SYSTEM 202
CASE TOOL 210
FORMAL SPECIFICATION 215
VALIDATOR 220
SYSTEM LOGIC TRANS-LATOR 232
USER-INTER-FACE TRANS-LATOR 234
DATA-BASE GENE-RATOR 236
DOCU-MENT-ATION GENE-RATOR 238
APPLICATION CODE 204
DATABASE SCHEMA 206
DOCUMENTATION 208

FIG. 2

AUTOMATIC SOFTWARE PRODUCTION SYSTEM
INVENTOR: IBORRA AND PASTOR
SERIAL NO. 09/872,413
FILING DATE: 06/01/01
DOCKET NO. CHG-001.1P

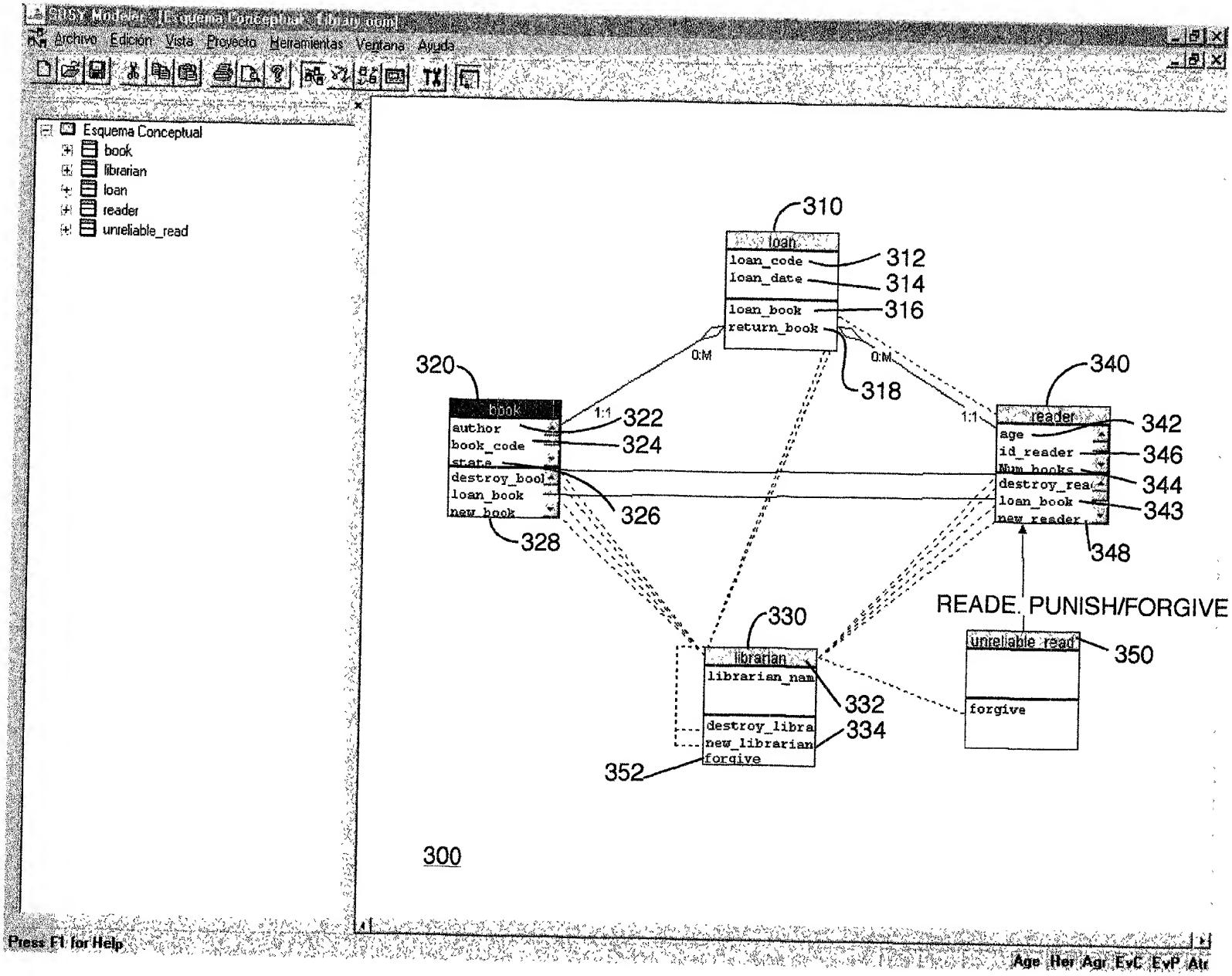


FIG. 3

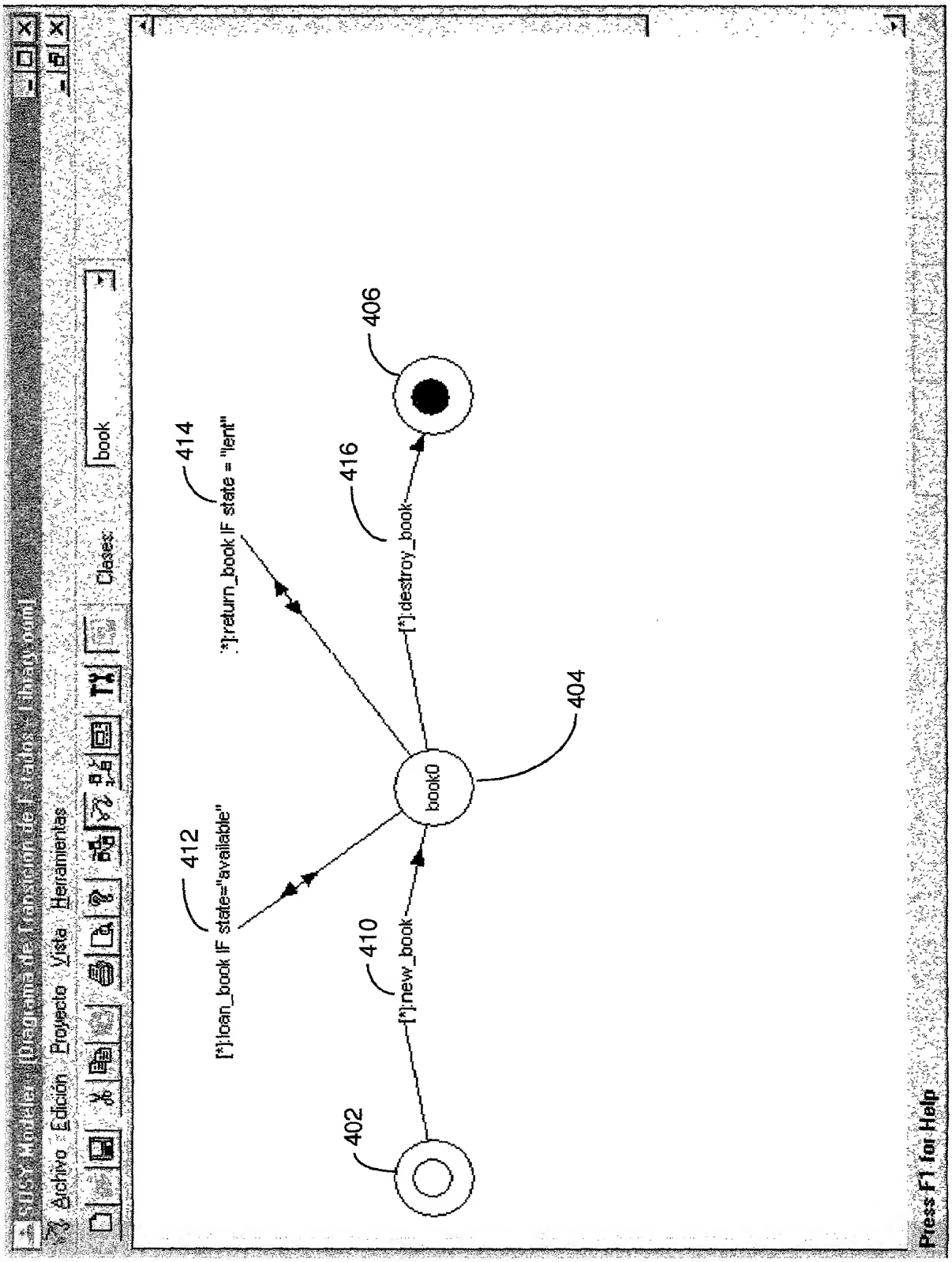

Archivo Edición Proyecto Vista Herramientas
Clases
book
book0
[*]loan_book IF state="available"
[*]new_book
*]return_book IF state = "lent"
[*]destroy_book
402
404
406
410
412
414
416
Press F1 for Help

FIG. 4A

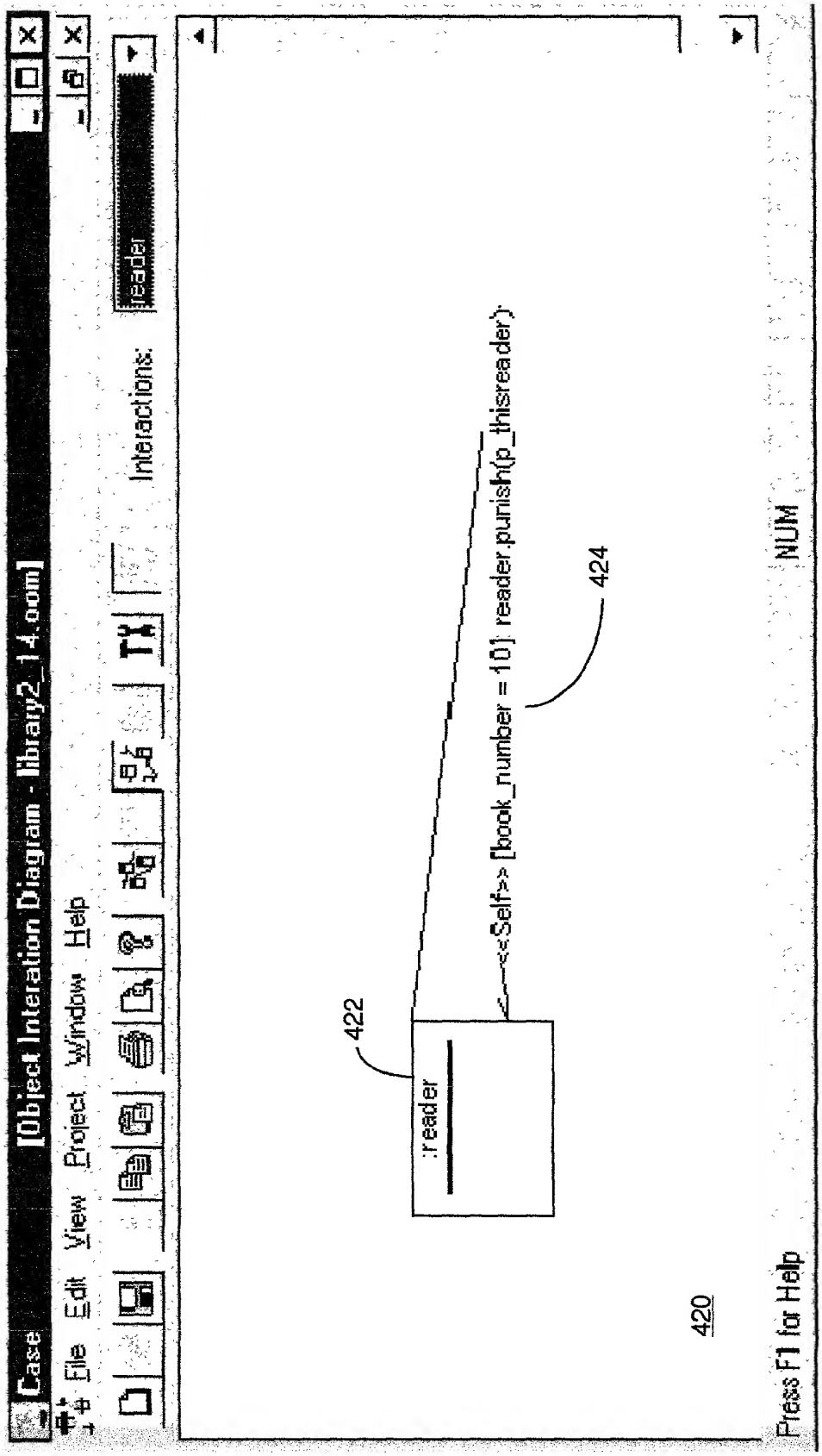

Case
[Object Interation Diagram - library2_14.oom]
File Edit View Project Window Help
Interactions:
reader
:reader
<<Self>> [book_number = 10] reader.punish(p_thisreader)
422
424
420
Press F1 for Help
NUM

FIG. 4B

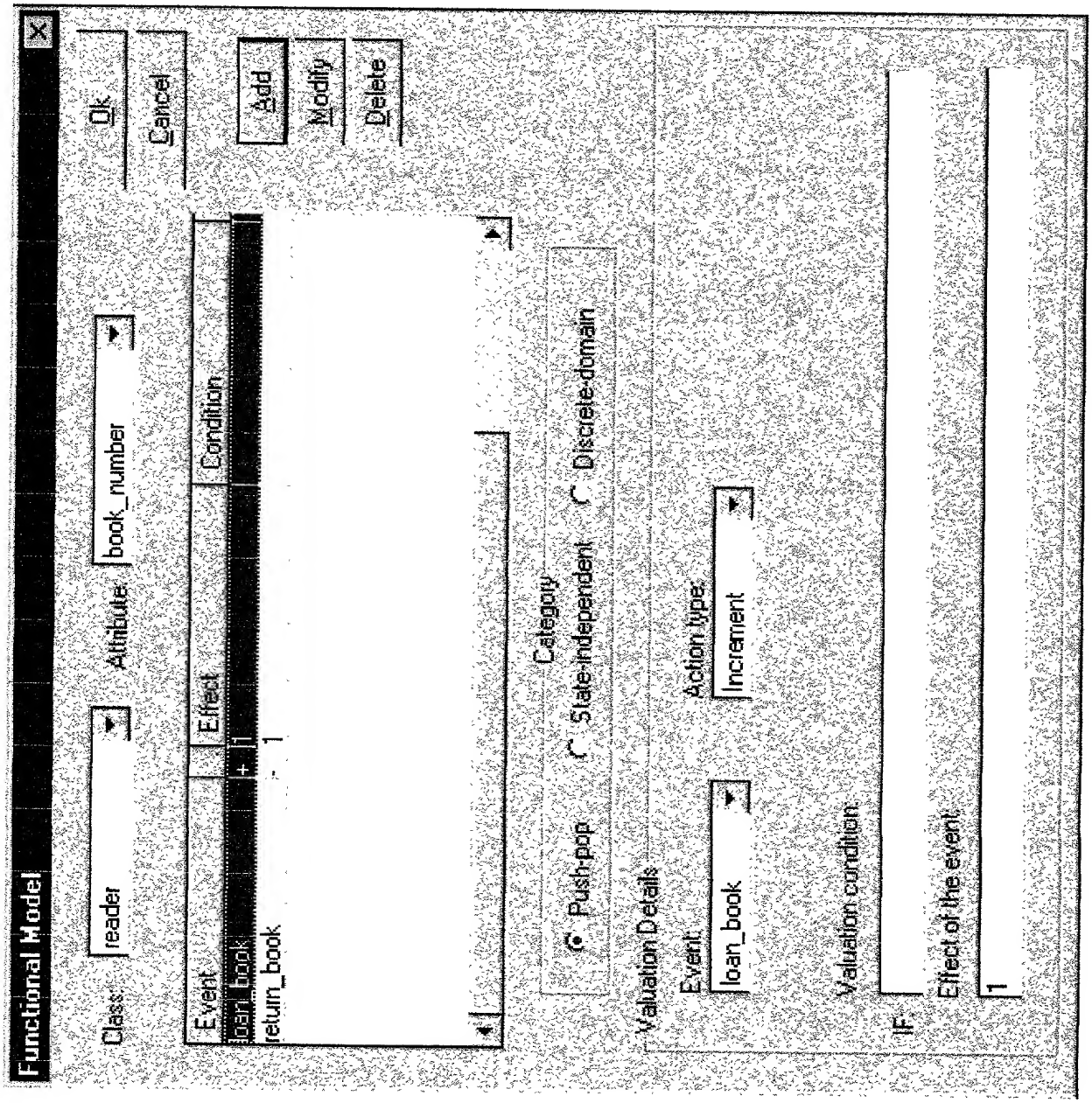

Functional Model
Class
reader
Attribute
book_number
Ok
Cancel
Event
Effect
Condition
loan_book
return_book
1
Add
Modify
Delete
Category
Push-pop
State-independent
Discrete-domain
Valuation Details
Event
loan_book
Action type
Increment
Valuation condition
IF
Effect of the event
1

FIG. 5

FLOWCHART OF THE FUNCTIONS THAT ALL SPECIES OF SYSTEM LOGIC TRANSLATORS WILL PREFORM

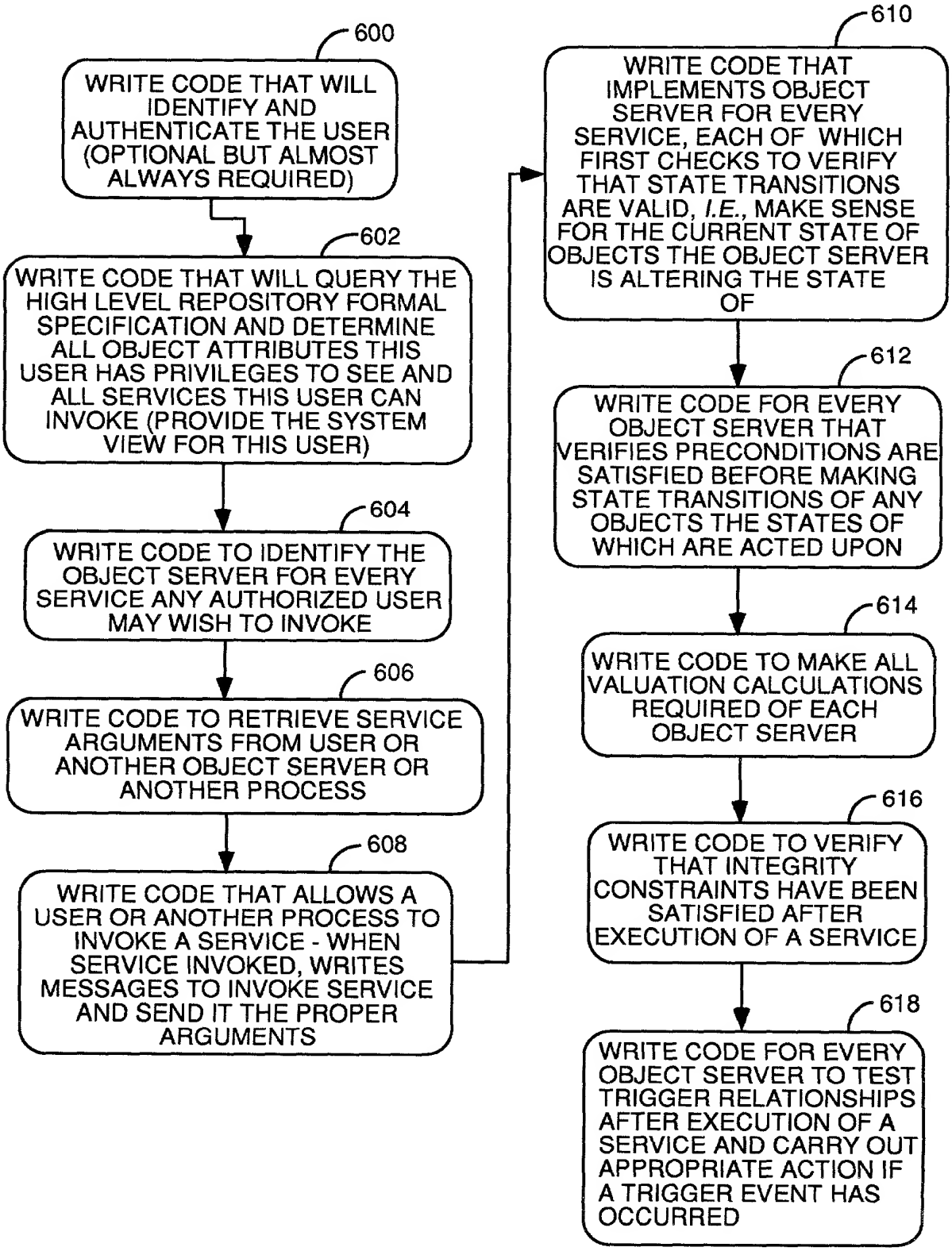


FIG. 6

FLOWCHART OF THE FUNCTIONS THAT ALL SPECIES IN THE USER INTERFACE TRANSLATOR SUBGENUS WILL PREFORM

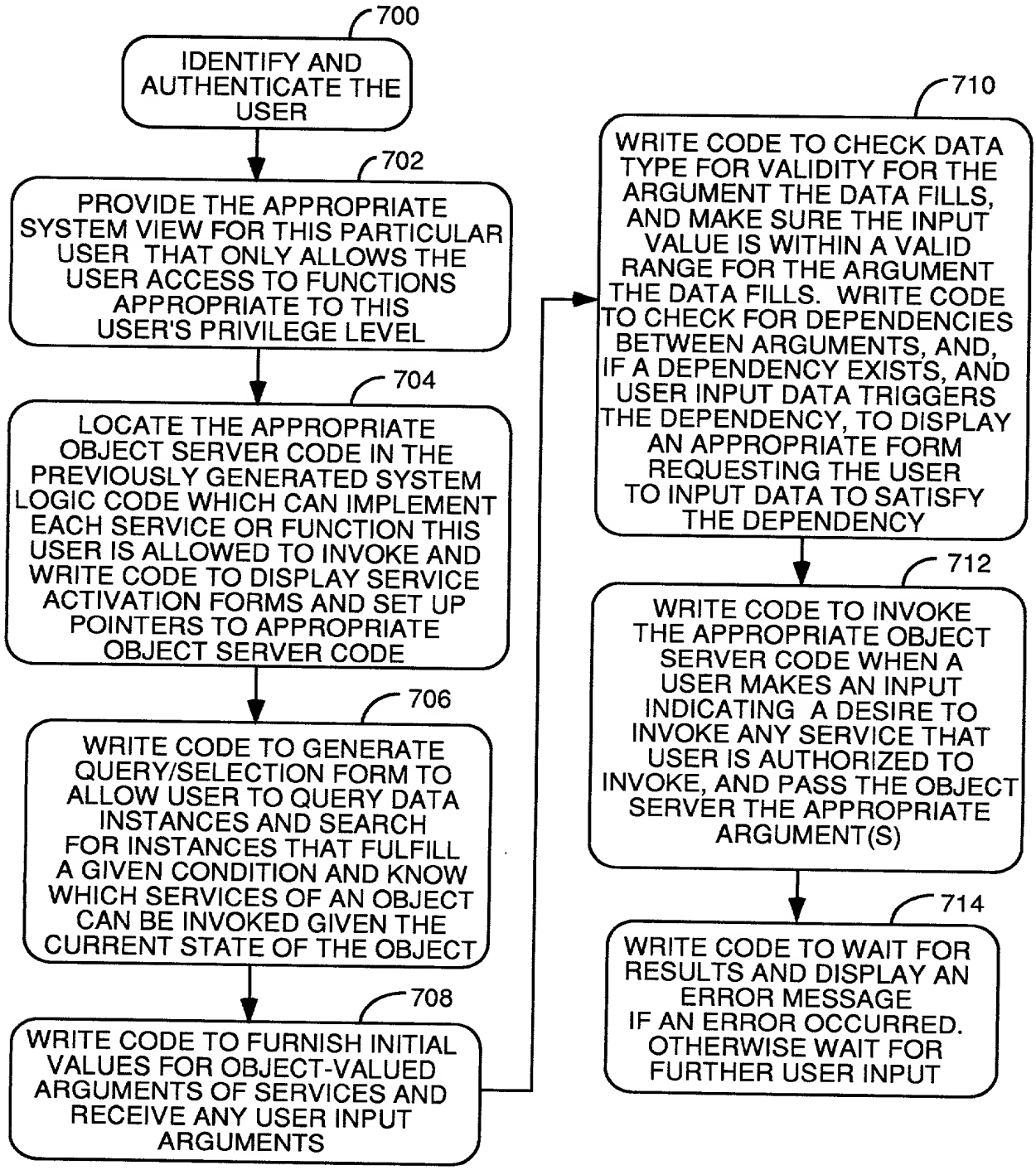


FIG. 7

FLOWCHART OF THE FUNCTIONS THAT ALL SPECIES IN THE DATABASE GENERATOR TRANSLATOR SUBGENUS WILL PERFORM

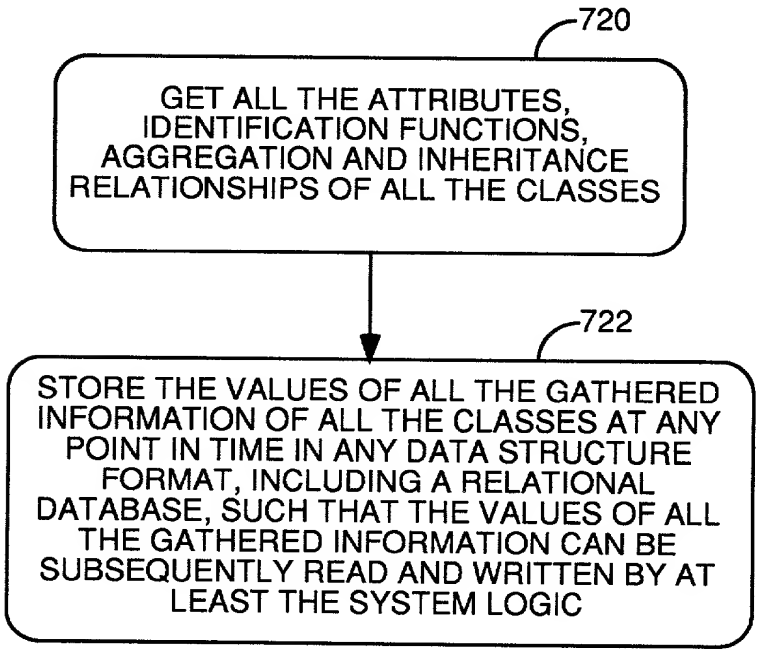
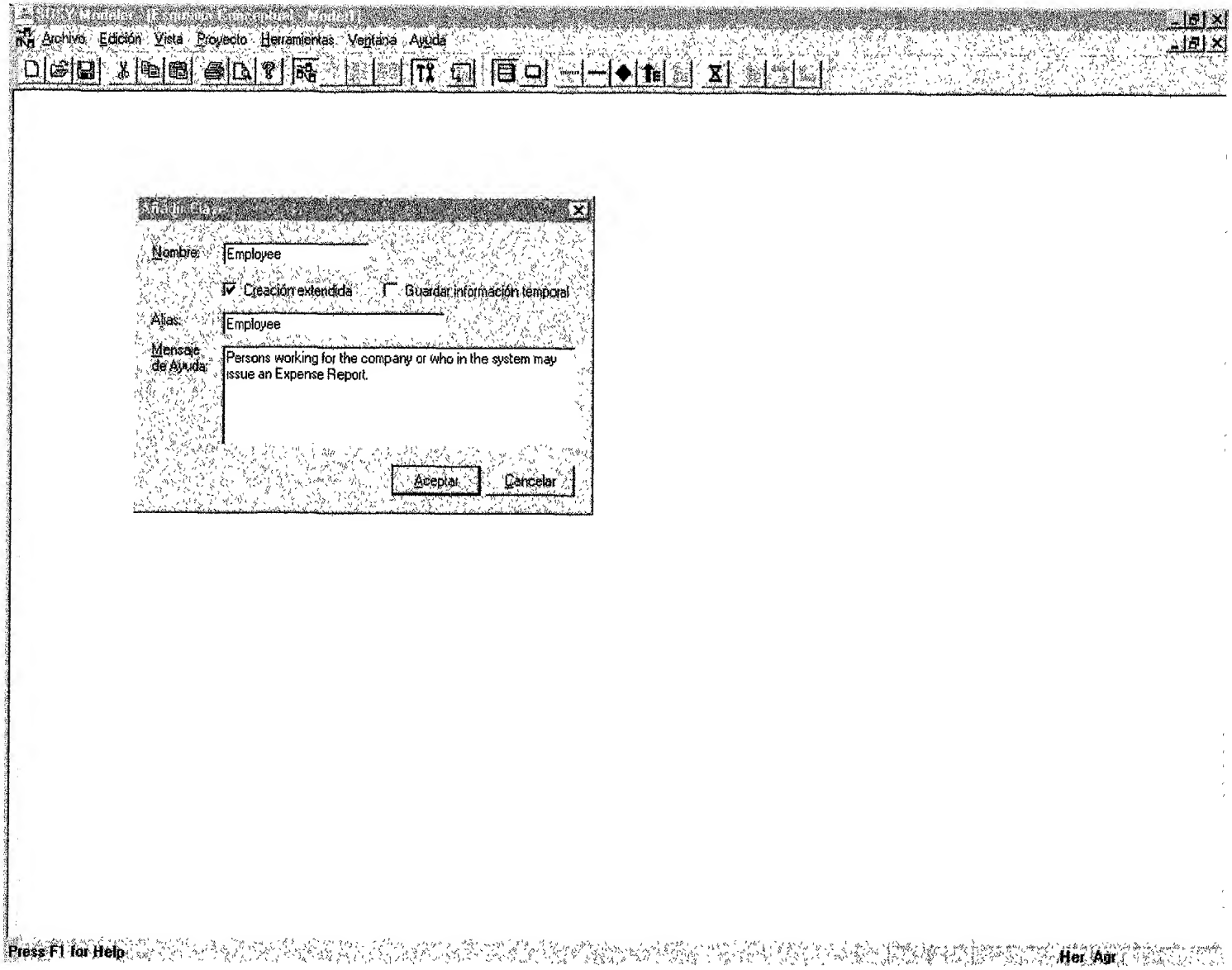


FIG. 8

TOP SECRET - EYES ONLY

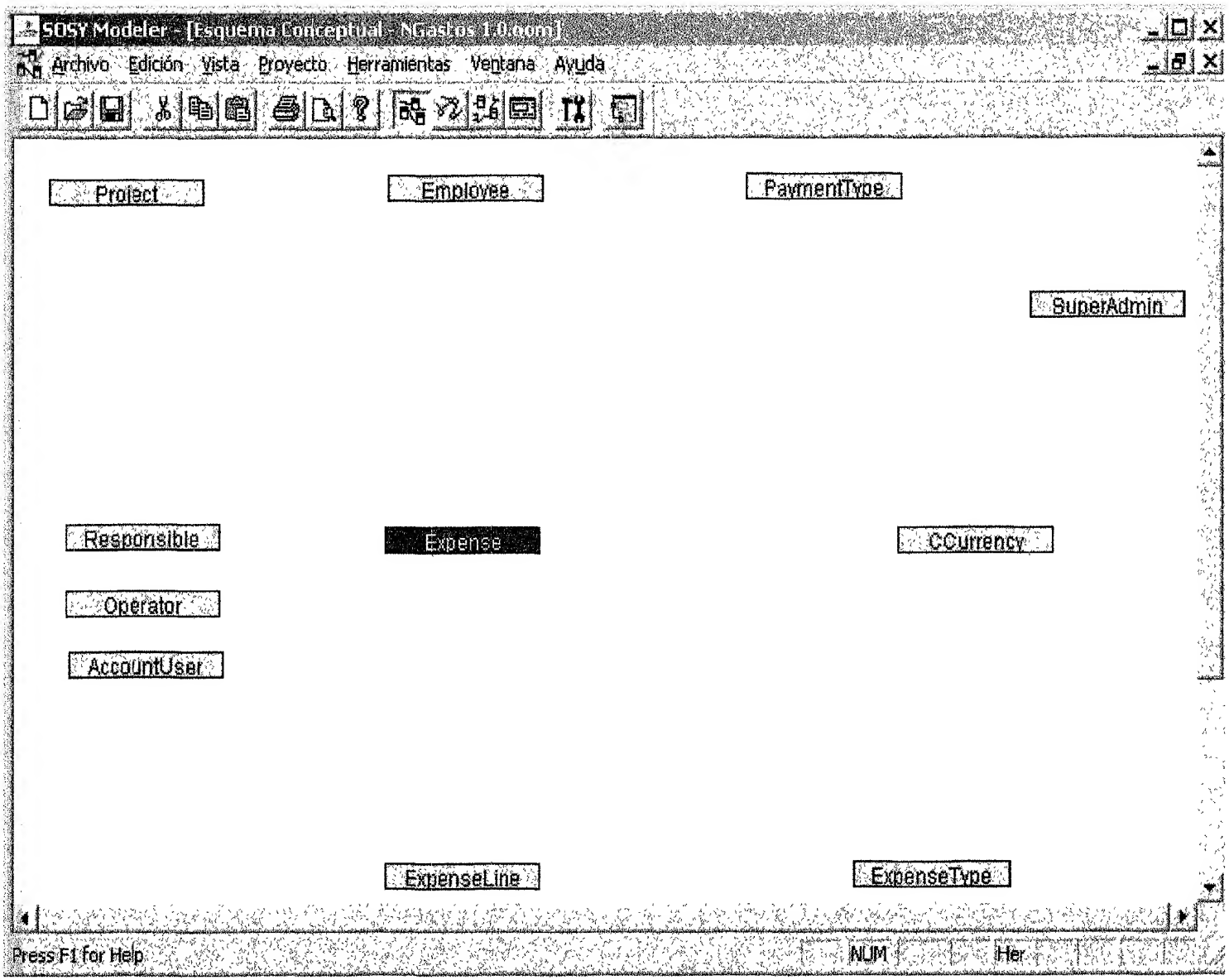


CLASS CREATION DIALOG

FIG. 9A

AUTOMATIC SOFTWARE PRODUCTION SYSTEM
INVENTOR: IBORRA AND PASTOR
SERIAL NO. 09/872,413
FILING DATE: 06/01/01
DOCKET NO. CHG-001.1P

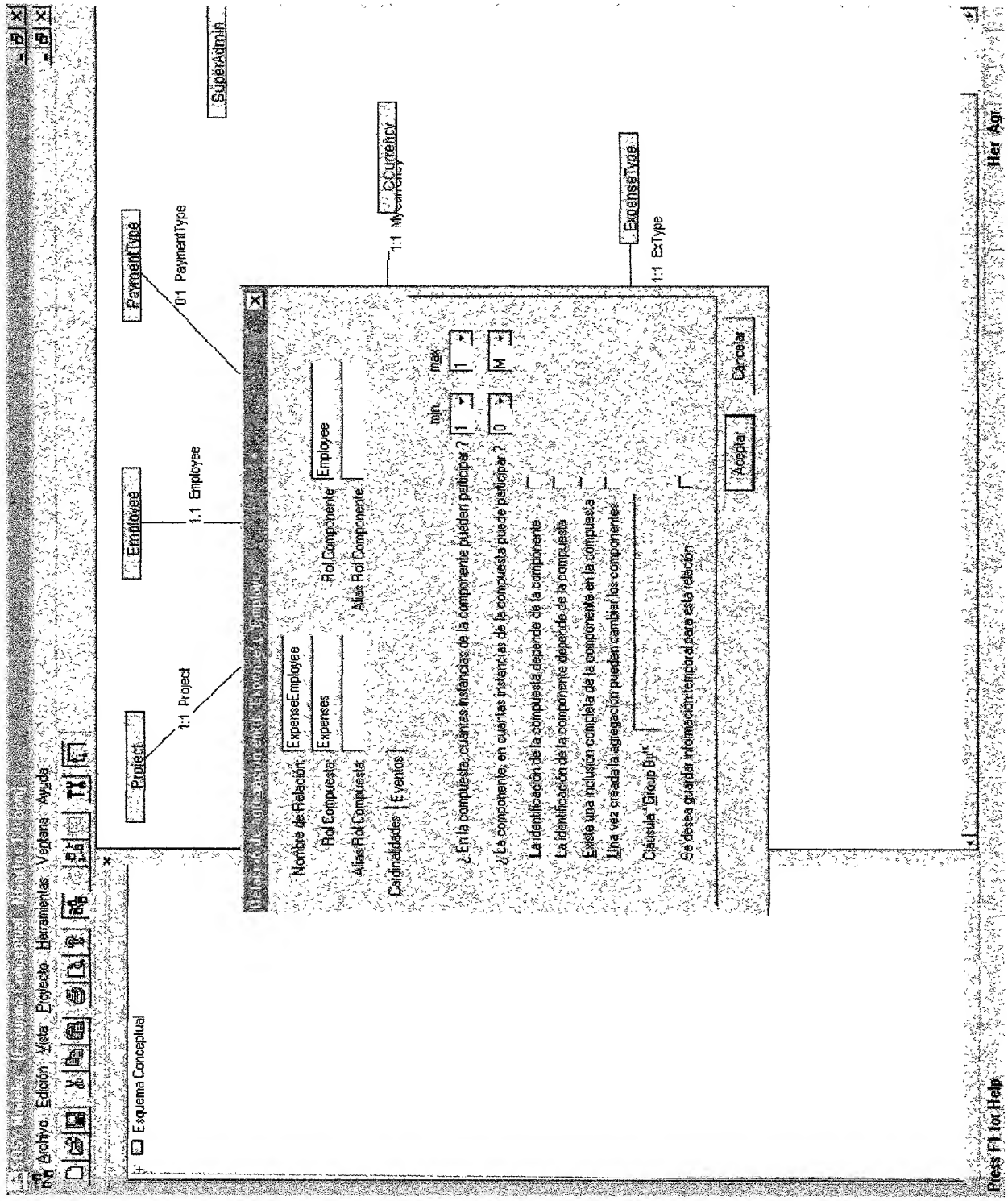
PROOF CHECK



ALL CLASSES NEEDED AND CREATED IN EXPENSE MANAGEMENT SYSTEM

FIG. 9B

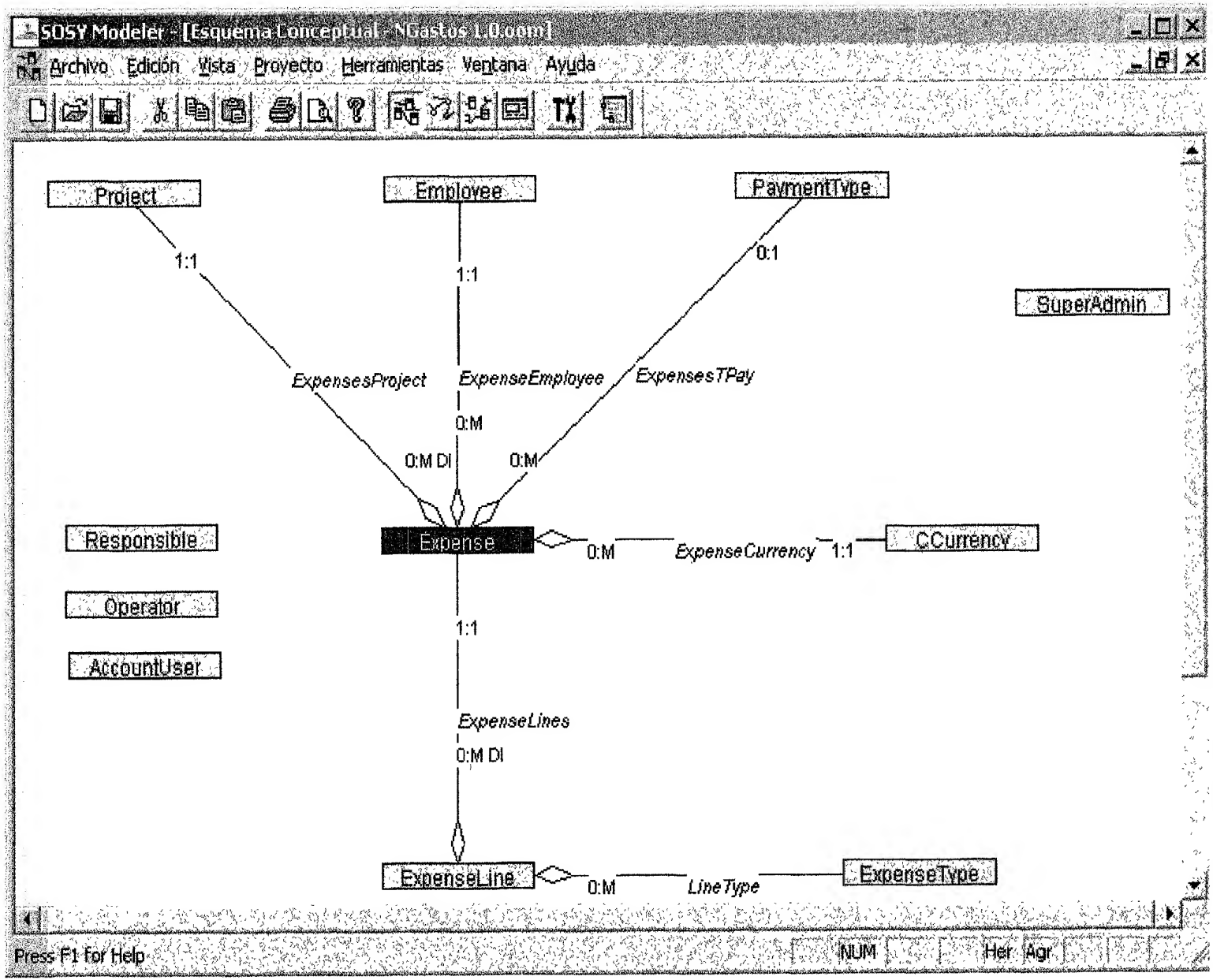
AUTOMATIC SOFTWARE PRODUCTION SYSTEM
INVENTOR: IBORRA AND PASTOR
SERIAL NO. 09/872,413
FILING DATE: 06/01/01
DOCKET NO. CHG-001.1P



DIALOG TO CREATE AND MODIFY RELATIONSHIPS BETWEEN CLASSES

FIG. 9C

AUTOMATIC SOFTWARE PRODUCTION SYSTEM
INVENTOR: IBORRA AND PASTOR
SERIAL NO. 09/872,413
FILING DATE: 06/01/01
DOCKET NO. CHG-001.1P



GRAPHIC DIALOG TO CREATE RELATIONSHIPS BETWEEN CLASSES AND GRAPHICALLY SHOW THE RELATIONSHIPS SO CREATED

FIG. 10

AUTOMATIC SOFTWARE PRODUCTION SYSTEM
INVENTOR: IBORRA AND PASTOR
SERIAL NO. 09/872,413
FILING DATE: 06/01/01
DOCKET NO. CHG-001.1P

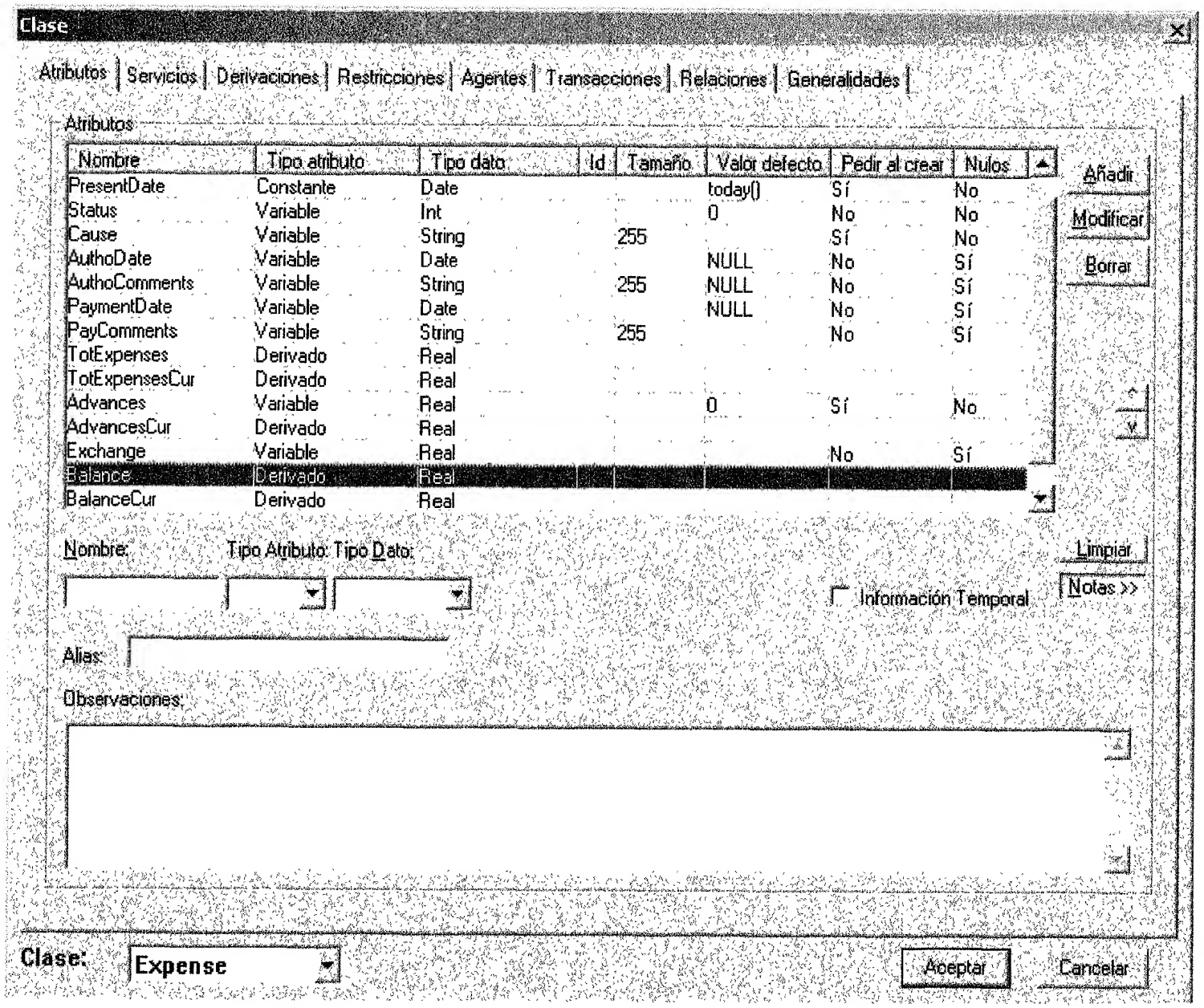


FIG. 11A

TOP SECRET//SI//NOFORN

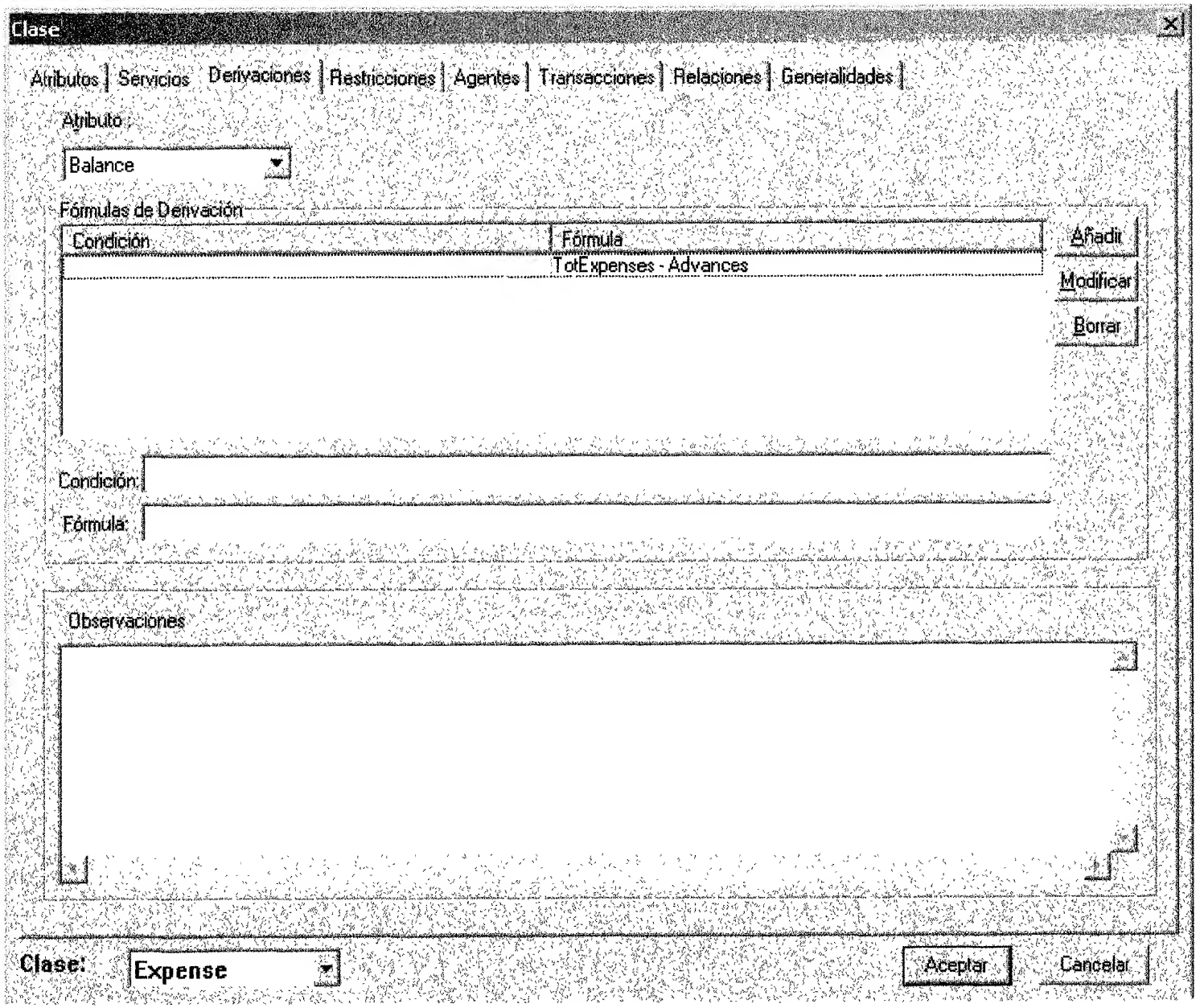
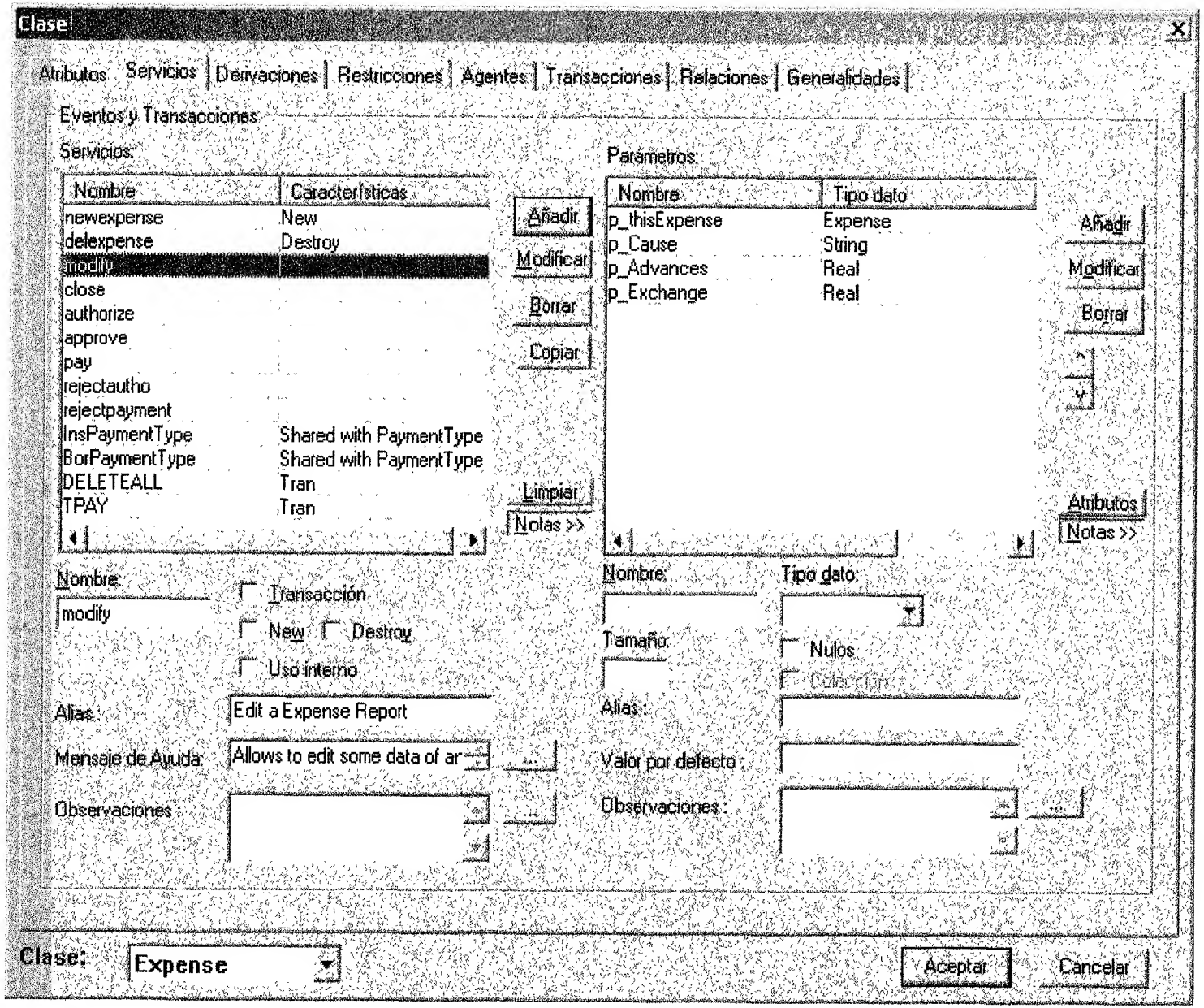


FIG. 11B

AUTOMATIC SOFTWARE PRODUCTION SYSTEM
INVENTOR: IBORRA AND PASTOR
SERIAL NO. 09/872,413
FILING DATE: 06/01/01
DOCKET NO. CHG-001.1P

TOP SECRET EYES ONLY

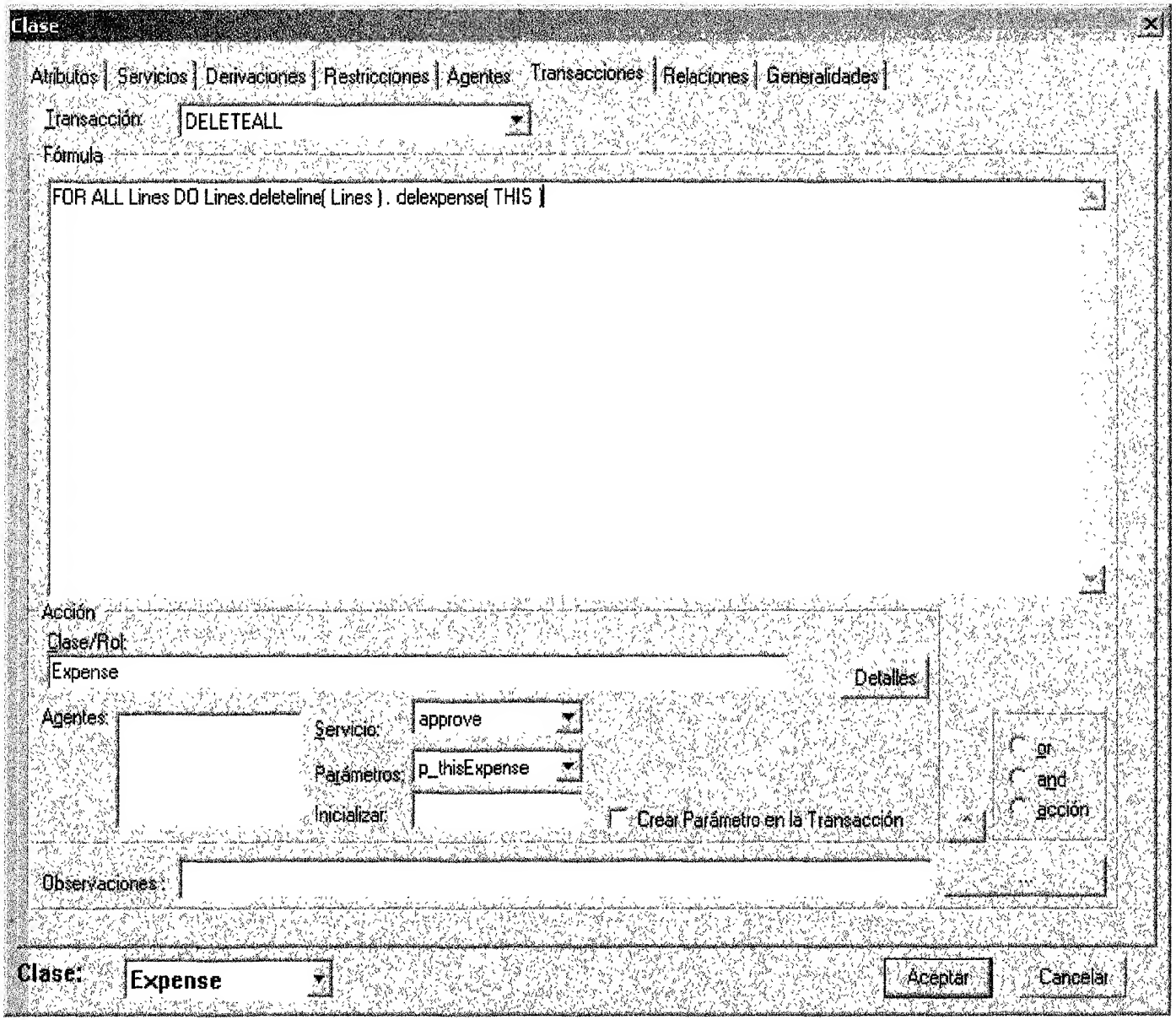


SERVICES OF CLASS "EXPENSE"

FIG. 12

AUTOMATIC SOFTWARE PRODUCTION SYSTEM
INVENTOR: IBORRA AND PASTOR
SERIAL NO. 09/872,413
FILING DATE: 06/01/01
DOCKET NO. CHG-001.1P

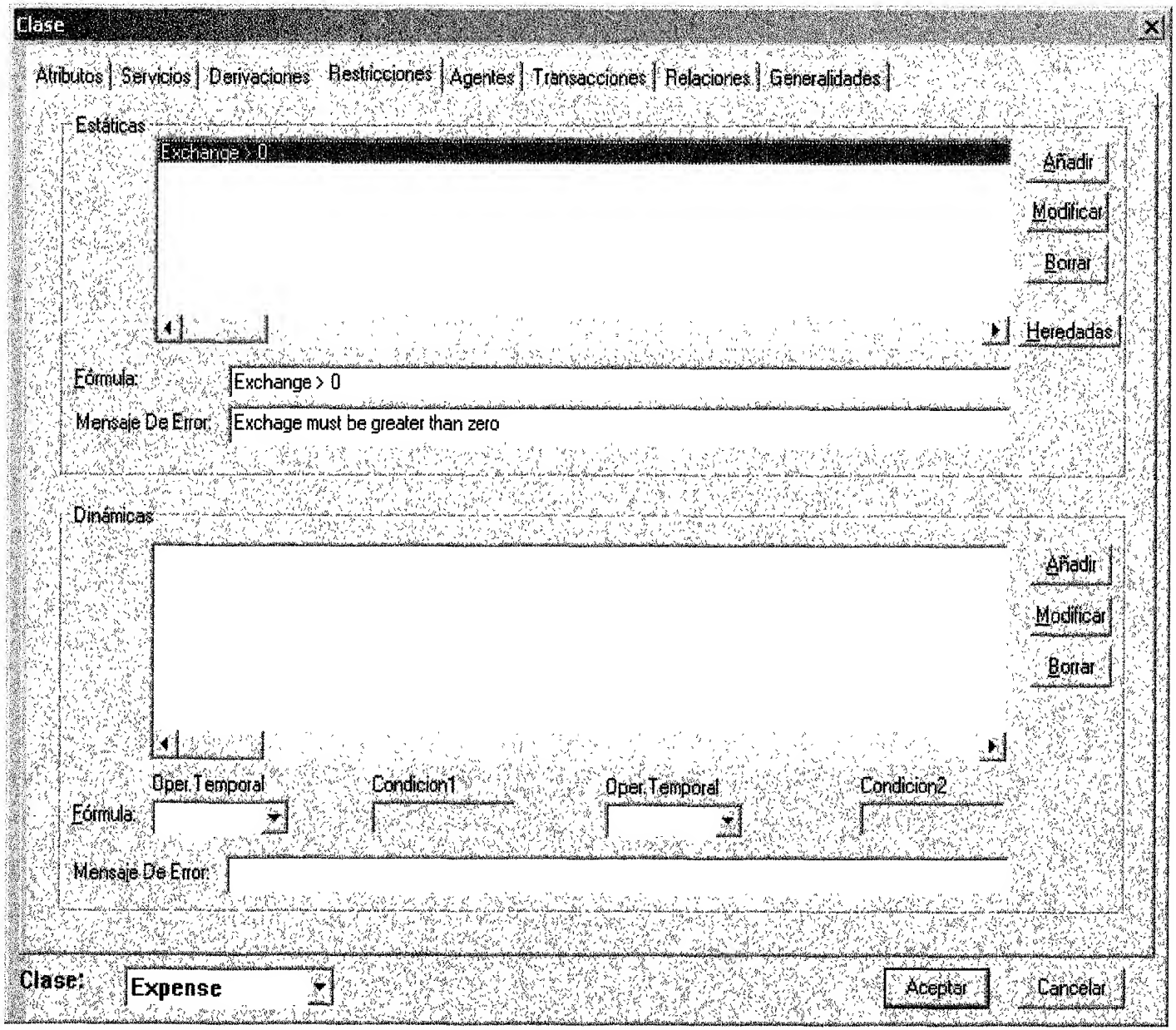
AUTOMATIC SOFTWARE PRODUCTION SYSTEM
INVENTOR: IBORRA AND PASTOR
SERIAL NO. 09/872,413
FILING DATE: 06/01/01
DOCKET NO. CHG-001.1P



DIALOG TO DEFINE FORMULA FOR "DELETEALL" TRANSACTION

FIG. 13

TOP SECRET//SI//NF

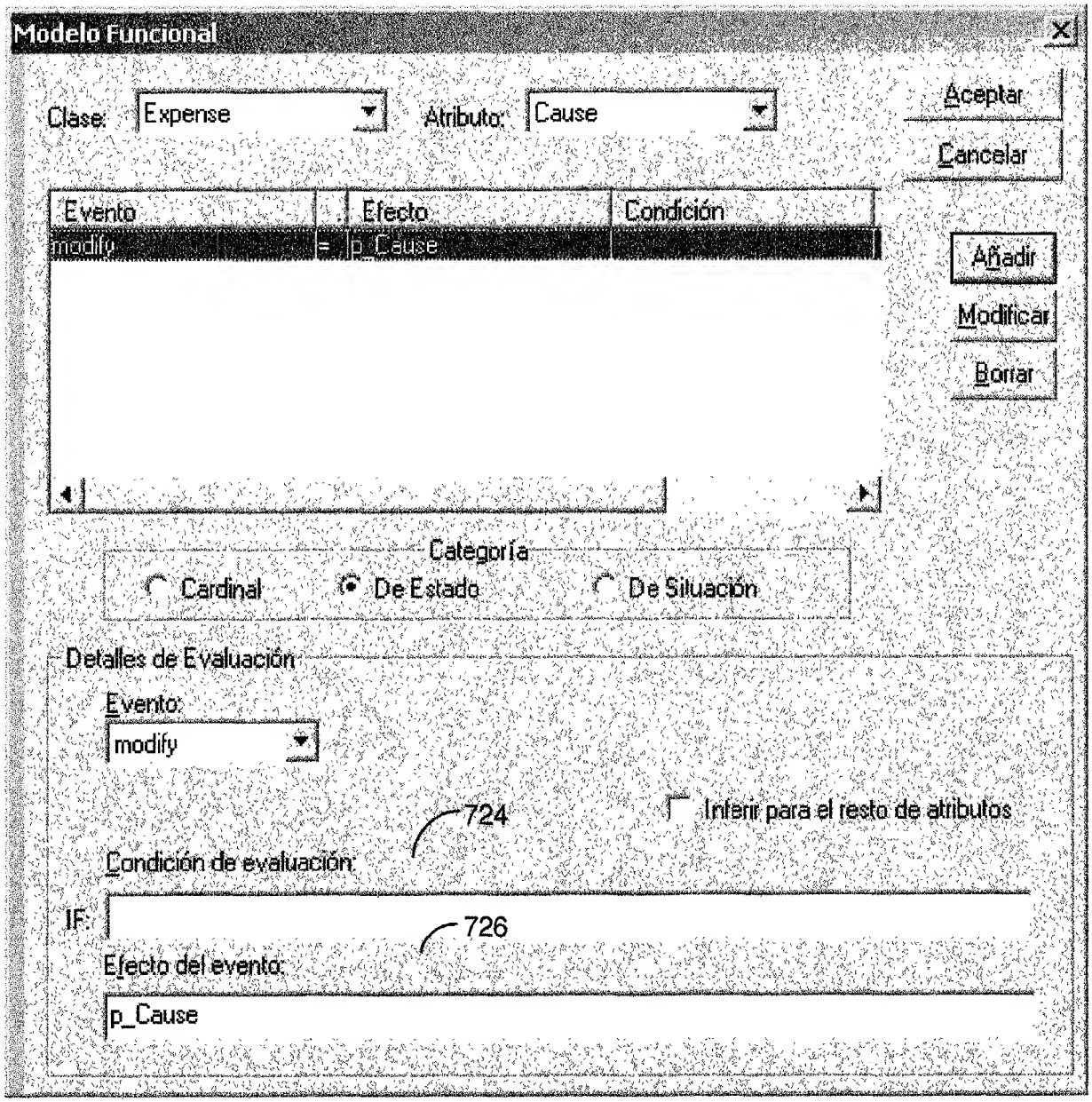


INTEGRITY CONSTRAINTS OF EXPENSE CLASS

FIG. 14

AUTOMATIC SOFTWARE PRODUCTION SYSTEM
INVENTOR: IBORRA AND PASTOR
SERIAL NO. 09/872,413
FILING DATE: 06/01/01
DOCKET NO. CHG-001.1P

Microsoft Embedded

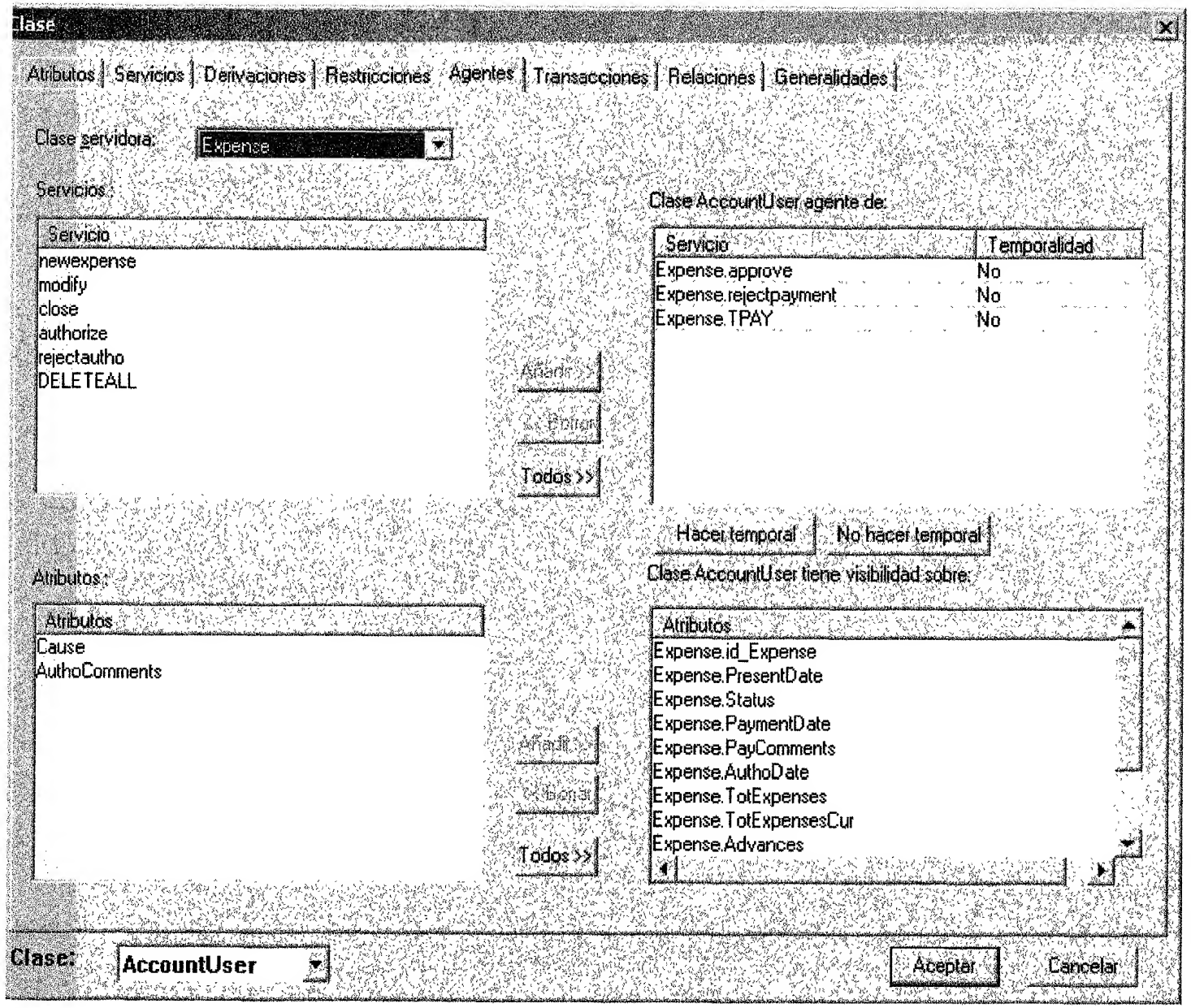


DIALOG BOX TO CREATE EVALUATION OF "CAUSE" ATTRIBUTE WITH THE "MODIFY" EVENT TO FORM PART OF FUNCTIONAL MODEL

FIG. 15

AUTOMATIC SOFTWARE PRODUCTION SYSTEM
INVENTOR: IBORRA AND PASTOR
SERIAL NO. 09/872,413
FILING DATE: 06/01/01
DOCKET NO. CHG-001.1P

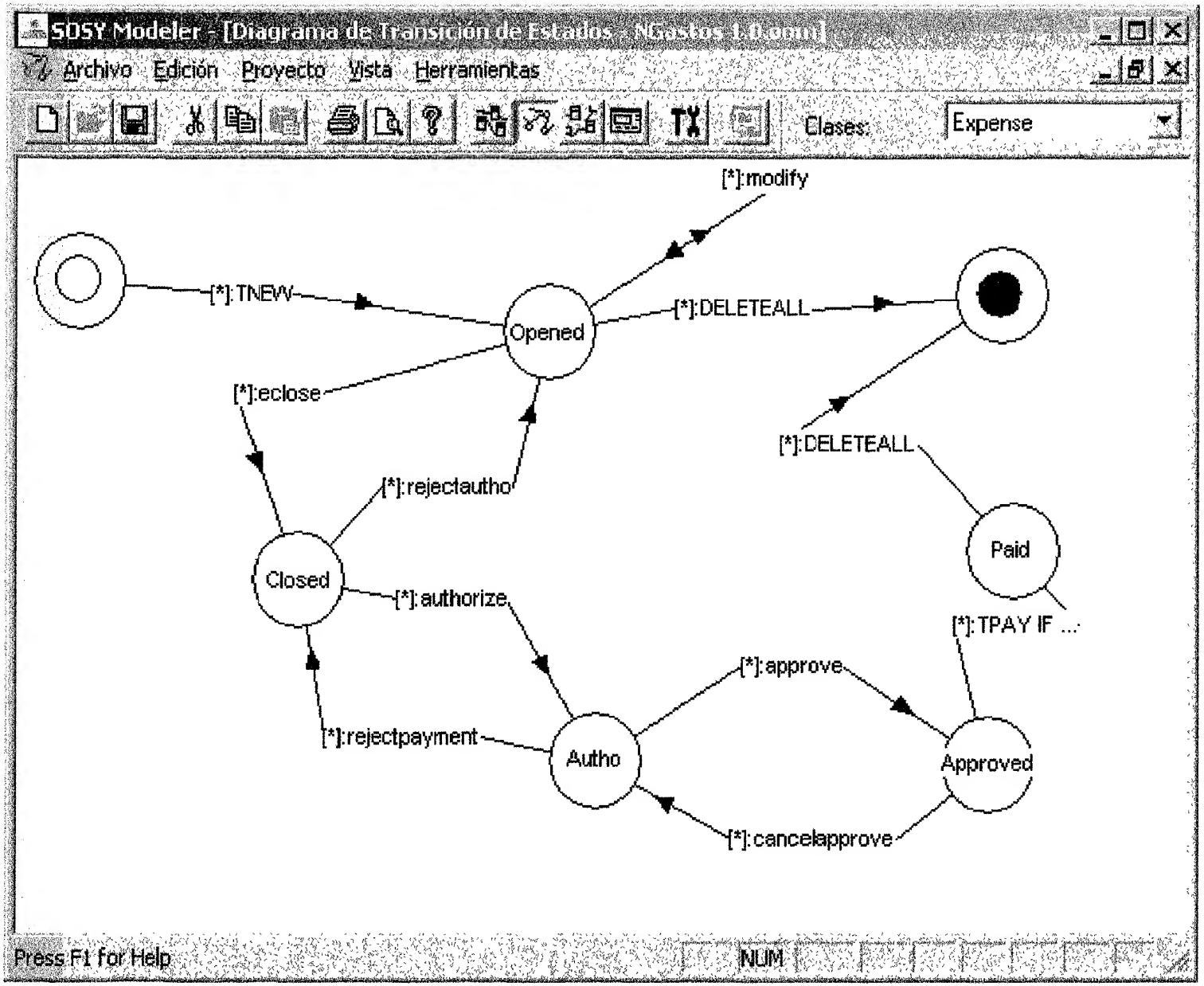
AUTOMATIC SOFTWARE PRODUCTION SYSTEM
INVENTOR: IBORRA AND PASTOR
SERIAL NO. 09/872,413
FILING DATE: 06/01/01
DOCKET NO. CHG-001.1P



AGENT RELATIONSHIP DIALOG THAT CAN BE USED TO SET WHICH SERVICES "ACCOUNT USE" CAN ACCESS AND VISIBILITY OF CLASS ATTRIBUTES FOR THIS USER

FIG. 16

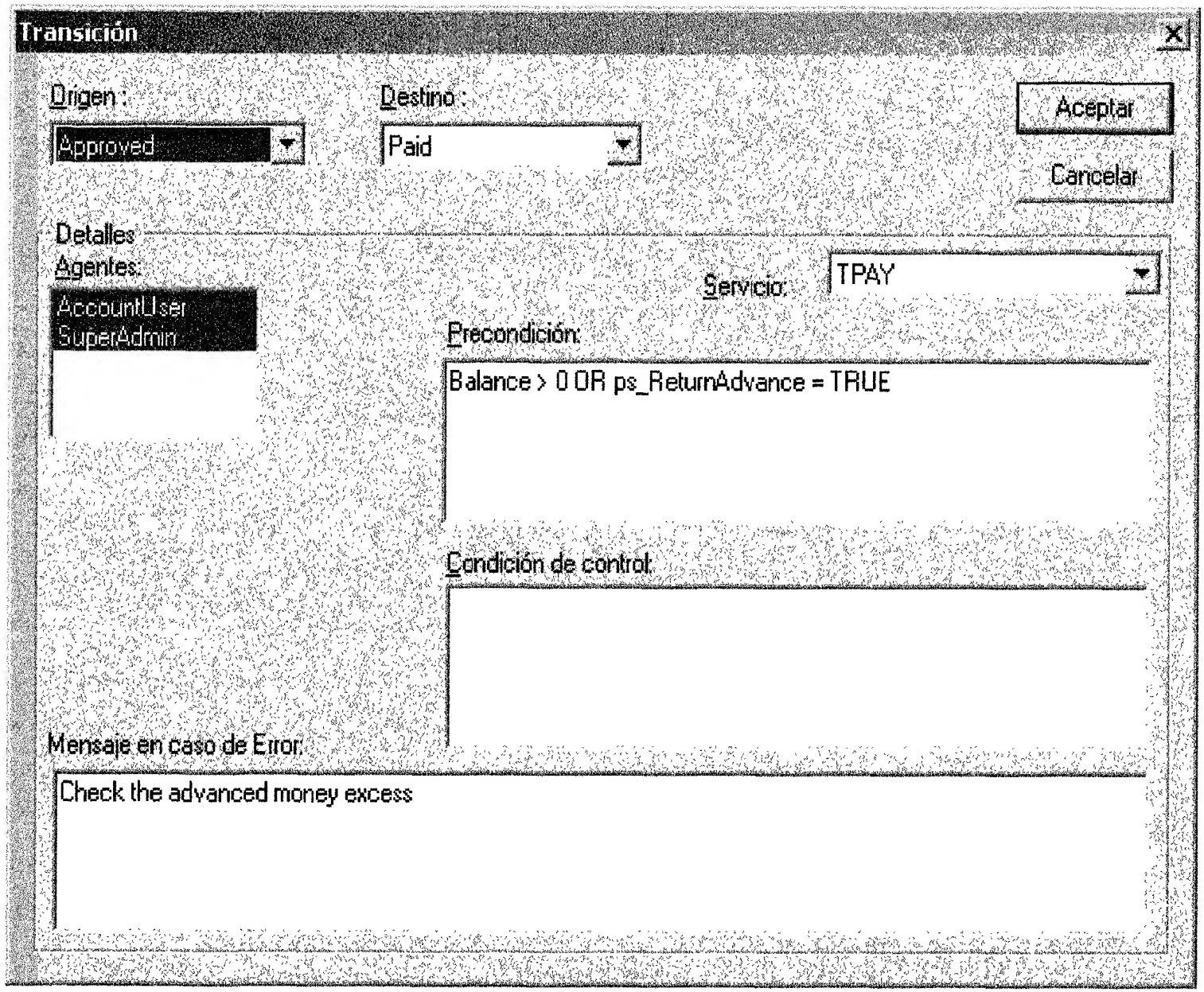
AUTOMATIC SOFTWARE PRODUCTION SYSTEM
INVENTOR: IBORRA AND PASTOR
SERIAL NO. 09/872,413
FILING DATE: 06/01/01
DOCKET NO. CHG-001.1P



STATE TRANSITION DIAGRAM FOR CLASS "EXPENSE"

FIG. 17

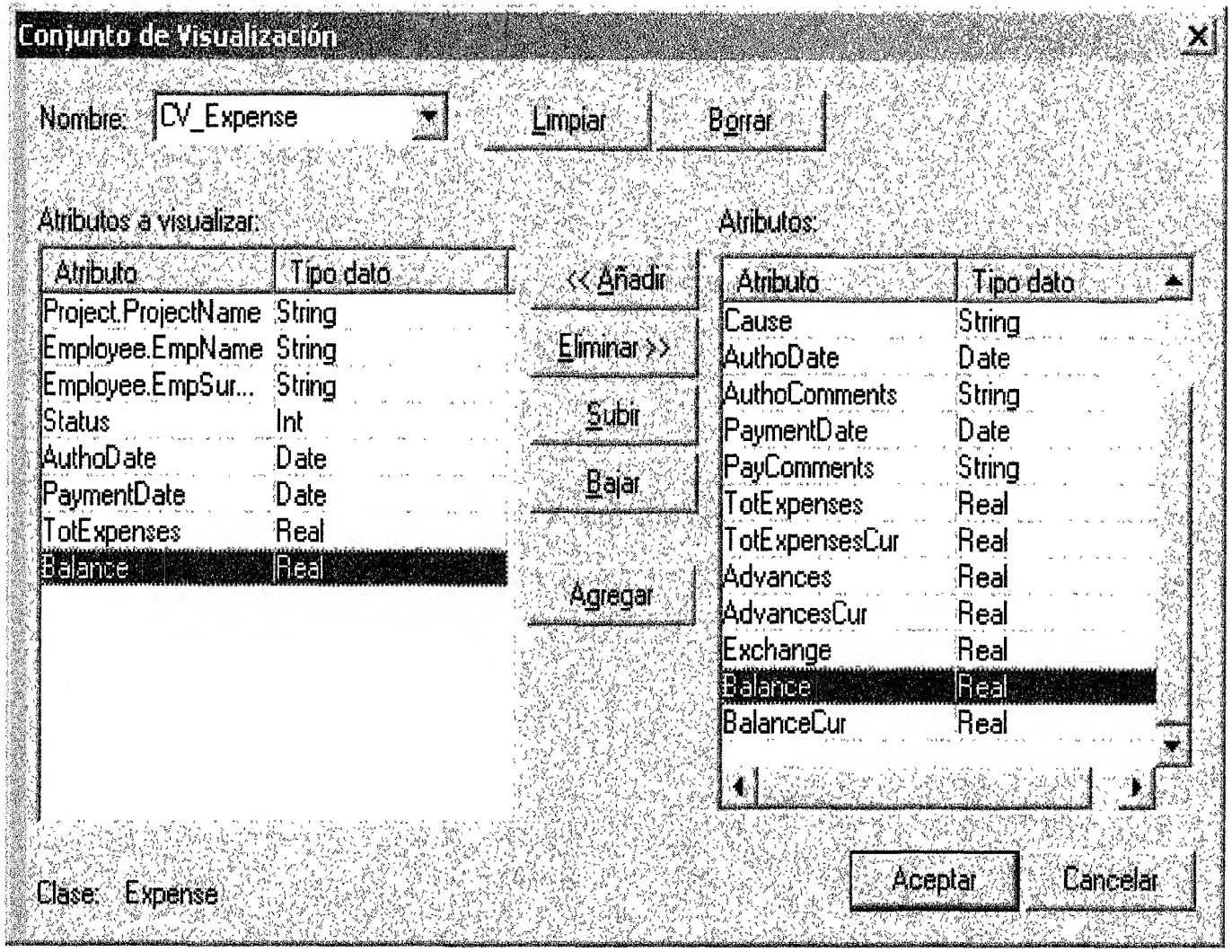
AUTOMATIC SOFTWARE PRODUCTION SYSTEM
INVENTOR: IBORRA AND PASTOR
SERIAL NO. 09/872,413
FILING DATE: 06/01/01
DOCKET NO. CHG-001.1P



DIALOG BOX TO MODEL PRECONDITION

FIG. 18

TOTOAT ETH2260

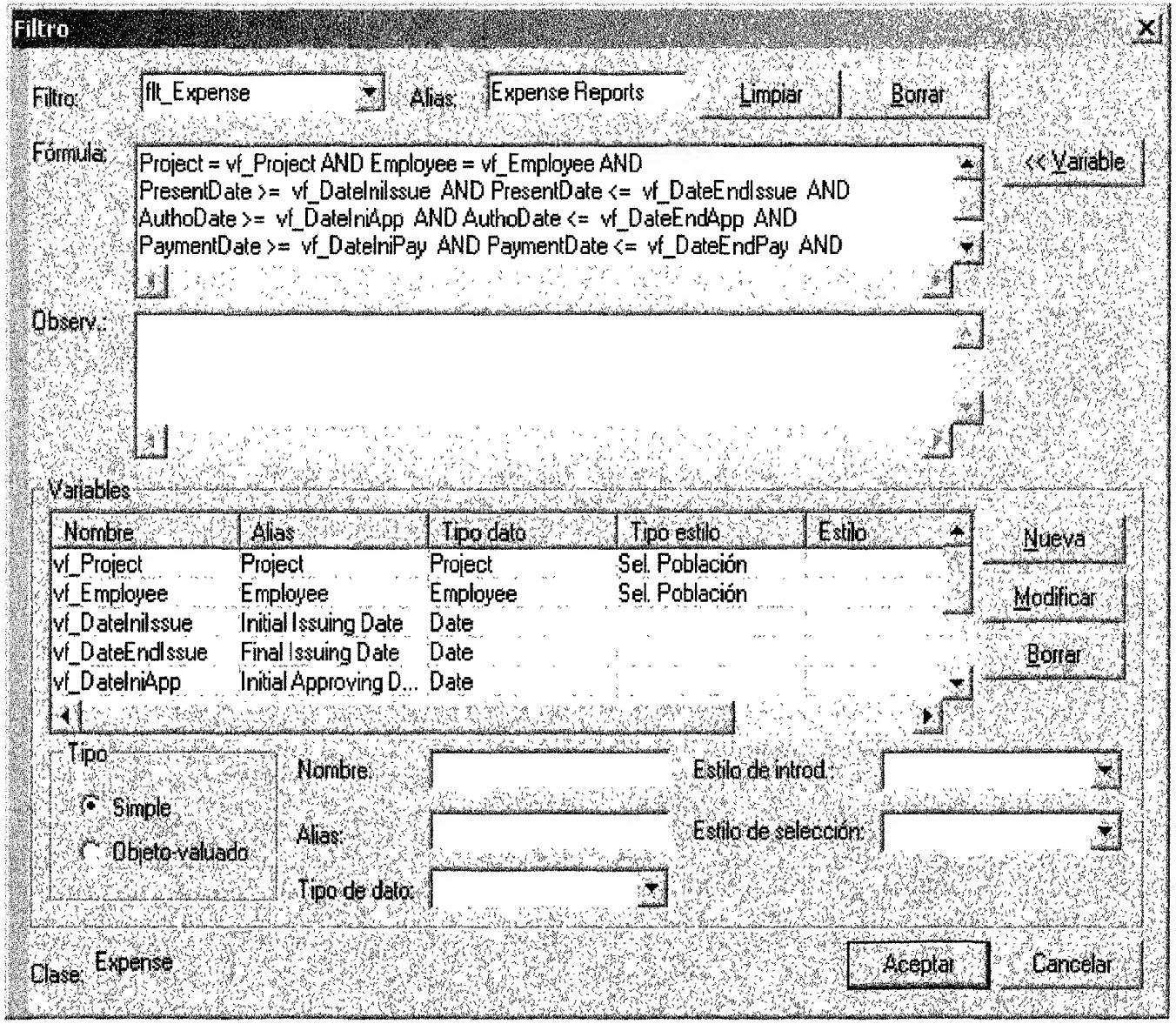


DIALOG BOX USED BY SOSY MODELER TO ESTABLISH A SET OF ATTRIBUTES TO BE DISPLAYED FOR THE "EXPENSE" CLASS

FIG. 19

AUTOMATIC SOFTWARE PRODUCTION SYSTEM
INVENTOR: IBORRA AND PASTOR
SERIAL NO. 09/872,413
FILING DATE: 06/01/01
DOCKET NO. CHG-001.1P

AUTOMATIC SOFTWARE PRODUCTION SYSTEM
INVENTOR: IBORRA AND PASTOR
SERIAL NO. 09/872,413
FILING DATE: 06/01/01
DOCKET NO. CHG-001.1P



DIALOG BOX USED BY SOSY MODELER TO ESTABLISH THE SEARCHING CRITERIA FOR THE EXPENSE CLASS AND TO ESTABLISH THE FILTER FORMULA TO USE AND THE VARIABLES TO REQUEST THE USER TO ENTER

FIG. 20

FLOWCHART OF THE FUNCTIONS THAT ALL SPECIES IN THE DOCUMENTATION GENERATOR TRANSLATOR SUBGENUS WILL PERFORM

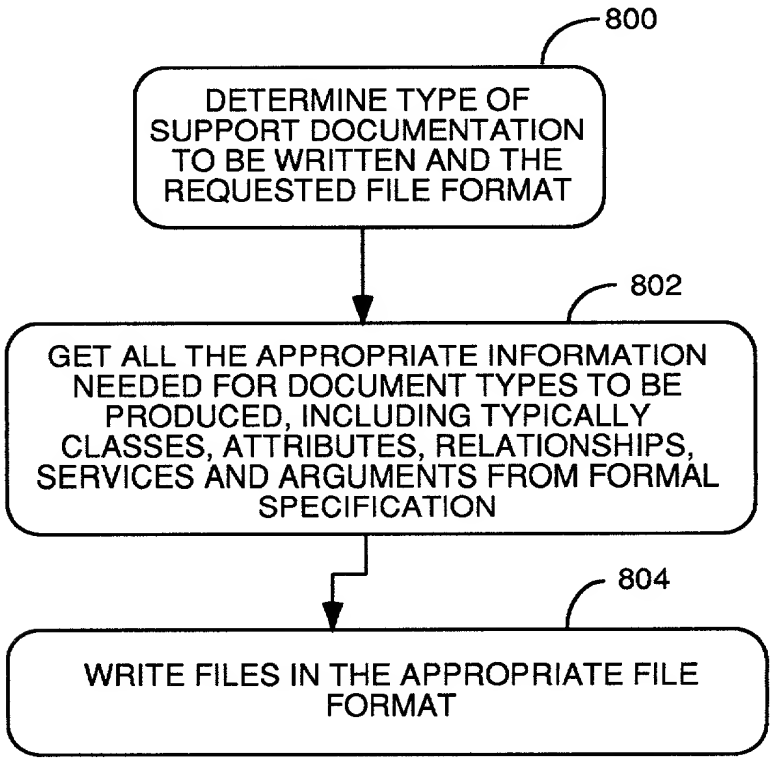


FIG. 21